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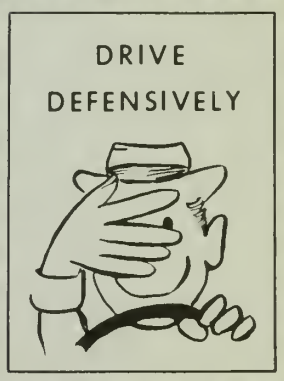
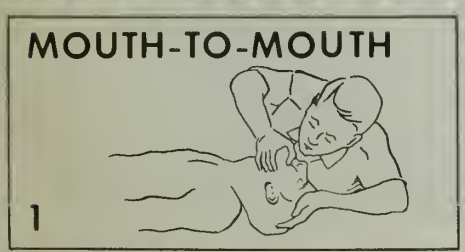
SAFETY DIGEST

AMC Pamphlet
AMC 385-78

JULY 1967





A REAL
BREATH
OF SAFETY

LTG BUNKER PRESENTS AMC FY 1966 SAFETY AWARDS

At a ceremony held at the AMC Board, Aberdeen Proving Ground, General Bunker presented AMC FY 1966 safety awards to the major subordinate commands.

LTG Bunker, Deputy Commanding General, AMC, is shown presenting BG Durrenberger, U.S. Army Weapons Command, the AMC Award of Honor for the best Command Safety Program.

MG Zierdt, U.S. Army Missile Command is shown accepting the AMC Award of Merit.

LTG BUNKER PRESENTS AMC FY 1966 SAFETY AWARDS

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MG Latta, U.S. Army Electronics Command, is shown accepting the AMC Commendation for Safety.

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BG White, U.S. Army Munitions Command, is shown accepting the AMC Commendation for Safety.

HEADQUARTERS
UNITED STATES ARMY MATERIEL COMMAND
WASHINGTON, D.C. 20315

AMC Pamphlet 385-78 JULY 1967

The Safety Digest is an AMC Pamphlet prepared by the Safety Division, Headquarters, U. S. Army Materiel Command. Its purpose is to disseminate information which can materially influence and improve safety programs at all Command establishments.

Articles are included to supplement technical knowledge as well as practical knowledge gained through experience. They provide a basis for the further refinement of safety measures already incorporated in operating procedures and process layout. To achieve maximum effectiveness, the Safety Digest should be given widespread circulation at each AMC establishment.

Articles appearing in the Safety Digest are unclassified and are not copyrighted. They may be reproduced as desired in order to bring pertinent accident prevention information to the attention of all employees. The Army Materiel Command Safety Digest should be given a credit line when articles are extracted.

Unclassified material believed to be of interest or benefit to other establishments is welcome for publication in the Safety Digest. Please send articles for review to: U. S. Army Materiel Command Field Safety Agency, Charlestown, Indiana. If possible, include pictures, charts, drawings, and illustrations that clarify and heighten interest in your presentation.

(AMCAD-S)

FOR THE COMMANDER:

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Special Distribution

I

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FY 1968 AMC SAFETY SCHOOL COURSES

The AMC Safety School has selected 18 classes in 8 subject areas for presentation in FY 1968. These resident courses will be held at the AMC Field Safety Agency, Charlestown, Indiana, between 11 September 1967 and 17 May 1968.

The AMC Safety School schedule for FY 1968 will include:

Introductory Safety - 1 class

Industrial Safety - 4 classes

Munitions Safety - 5 classes

Guided Missile and Rocket Safety - 1 class

Motor Vehicle Safety - 2 classes

Installation Safety Management - 3 classes

Nuclear Weapons Safety - 1 class

Applied Safety in Industrial Health and Hygiene - 1 class

The subject matter taught in the AMC Safety School is revised continually to incorporate information on the latest technical developments that affect the safety of AMC personnel and property.

Spaces for FY 1968 classes were allocated by the AMC Field Safety Agency in the latter part of May 1967. AMC subordinate commands, installations, and activities will use this information to schedule attendance for the various courses.

Between their periods of instruction in the resident courses, the staff of the AMC Safety School is engaged with field training courses at AMC installations and activities.

DEFENSIVE DRIVING

Safety Division, DASO
U.S. Army Missile Command

How would you describe a Defensive Driver?

This question was put to a large number of professional drivers at this installation. Many of those questioned have driven various types of motor vehicles 20 years or more, without an accident either on or off the job.

Although the answers received varied somewhat in composition, they all amplified the following characteristics in the profile of a Defensive Driver:

1. He manifests an attitude of self confidence but does not hesitate to display patience and courtesy to avoid an accident or to compromise an accident situation.

2. He gives full attention to driving, doesn't fight the problem, is generally relaxed, thus permitting his inner reflexes and driving skills to take over in his operation of the vehicle.

3. He doesn't crowd, or rush to beat the light, jump lanes, or squeeze the other guy.

4. He observes well ahead in his driving, as well as the immediate area, in order to get the "big picture" and determine accident situations that might be developing.

5. He compensates in his driving for weather and other conditions over which he has no control.

6. When he is behind the wheel, he asserts himself for safety and common sense and drives the way he knows he should.

Defensive Driving takes initiative and a strong mind. Too many drivers seem unable to develop this built-in attitude, and these drivers and others suffer for failure to do so.

The following information is furnished to assist in the development and improvement of defensive driving attitudes, skills, and techniques.

1. Driving in Darkness. Cooler temperature, fewer cars and lack of sun glare tempt some travelers to drive after sundown. The twilight to pitch dark period is the most dangerous time of the entire day for driving. Motor vehicle deaths at night total more than during the day. It is harder to see at night, because light intensity is so much lower. But other things contribute to the danger. For example:

a. Bug-smeared or dusty windshield.

b. Streaky wiper blades.

c. Dirty headlight lenses.

d. Advertising signs that may be confused with traffic signals.

e. Age - At 55 drivers need twice as much light as those 20 years old.

f. Glare from approaching cars. It is wise to dim your lights early. Do not look directly into the approaching lights. Watch right edge of road or lane marker until the glare is gone.

g. Smoking - Doctors say that frequent smoking before and during periods of night driving should be avoided. Carbon monoxide from smoking decreases the visual sensitivity of the eyes, especially in areas of low illumination.

2. Other Night Driving Tips.

a. Never drive with a headlight out.

b. Never use parking lights when car is in motion.

c. Check headlights occasionally, especially if other drivers blink you when you are on low beam.

d. Keep instrument lights dim; keep dome light off.

e. Travel 10 miles per hour slower at night.

f. Never wear any kind of colored glasses at night.

3. Thruway Techniques. Turnpike driving is highly demanding. Your close attention is needed every second. At turnpike speeds, 60 to 70 miles per hour, things happen fast, too fast for the inattentive driver to correct in time. When you travel thruways and expressways stay sharp, stay alert, and do not "poke" along. Watch your distance to the front; give turn signals twice as much time before you pull out to pass. Check your mirrors twice before passing. Do not cut back abruptly after passing. Stay out there in the passing lane until you are well in front of the car, 2 to 3 car lengths if possible, then head to your right. Don't be bashful about turning on your lights at dusk.

4. Tips From the Professionals. Professional drivers are the most skillful on the road. Here's what they say you can do to improve your driving.

a. Sit up straight at the wheel. Adjust the seat so you're 4 to 8 inches from the lower rim of the steering wheel.

b. Fasten your seat belt snugly.

c. Check your rear view mirrors to be sure they are correctly set for you.

d. Keep your eyes moving ahead, behind, to the sides, preparing for distant problems that can become immediate ones.

e. Leave yourself an "out" space in adjoining lanes, front, rear, shoulder.

f. Watch not only the car in front, but also the brake light of the car ahead of it, for extra time in stopping.

g. Learn to see potential accidents. An expert expects the car following the bus to suddenly swerve around it into his lane.

h. Use your horn if you are not sure the other fellow sees you The idea that a good driver never uses his horn is a dangerous fallacy.

i. Do not overdrive your physical ability. Driving efficiency peaks at 6 or 7 hours. After then it's best to slow down and take it easy.

j. When stopped in traffic to make a left turn, keep wheels headed straight ahead. Otherwise, should

you get "clobbered" from the rear you could be knocked into opposing lane of traffic.

h. At 4-way stops do not be too sure that other drivers will respect your turn to go. Be sure when you move out.

* * * *

PRESIDENTIAL CITATION OF MERIT

Their efforts to save the life of a fatally crushed fellow employee won Presidential Citations of Merit for 2 members of the Louisiana Army Ammunition Plant fire department. Shown holding their certificates are assistant Fire Chief Glen L. Williams, Jr., and Fireman Jimmy W. Bowen. Present to present the citation were (left to right) Mr. Harry Campbell, Mr. John McClanahan, Jr., parish board members, and Mr. Major DePingre, Webster Parish Red Cross Chairman. At the right Mr. T. L. Gaines, Plant Manager of Louisiana Army Ammunition Plant for the Remington Office Equipment Division of Sperry Rand Corporation; and LTC Joseph McGuffie, Commanding Officer. Mr. Williams and Mr. Bowen, together with several hundred Louisiana Army Ammunition Plant Employees, have completed Advanced First Aid courses during the last 5 years. Instructors for the courses were provided by the Webster Parish Red Cross.

WHY SUPERVISORS SHOULD INVESTIGATE ACCIDENTS

Every accident investigation should result in the elimination of similar accidents. An effective supervisor should learn from his investigation whether the accident was the result of an unsafe physical condition or an unsafe personal act. He makes his post-accident inspection promptly because he knows that conditions change and that details can be quickly forgotten. He checks all facts and collects all versions of the accident story.

Basically, an accident is an unexpected or unforeseen event. According to this definition, we all probably have accidents each day, although few of them result in injuries. A wrench might fall from a platform. It doesn't hit anyone, but the incident should be investigated to determine the cause. The next time it might injure someone. Therefore, the investigation should be just as thorough as if an injury had resulted. Find out who dropped the wrench and why. Train yourself to think of every such event as one that might have caused an injury. Is a better tool rack needed to prevent recurrence? Could the presently used rack be more conveniently placed? Take steps to prevent its happening again.

A department justifiably takes pride in a good safety record. Don't let the pursuit of such a record overshadow other important considerations. The man who sprains an ankle may be able to punch his time card and not hurt the safety record, but what about his production? He will be far more productive in the long run if he knows that you are looking out for his health.

An overall view of the causes of your accidents may give you some good ideas. Learn whether the accident rate for the group you supervise has increased or decreased. Maybe your safety efforts aren't as good as you think. Learn what group of workers most frequently has accidents. Maybe new employees need more supervision. Perhaps there is too much speed or complacency among the older workers.

- Extracted from:
  Thiokol Safety Report, January 67
  Thiokol Chemcial Corp., Longhorn Div.
  Longhorn Army Ammunition Plant.

HOT LINE

A prompt call to the right person in the event of an emergency can often make the difference between a minor mishap and a major misfortune. This is particularly true of emergencies involving radioactive materials. Since contact will be made by telephone in an emergency, information containing the telephone numbers of the appropriate persons to be reached should be available where they will be most accessible.

The right person to contact in the event of an emergency situation involving radioactive materials is the Radiological Protection Officer (RPO), or his alternate, as each is trained to evaluate and control the radiation hazard in such an incident.

Radiation hazards may take many forms. The untrained person probably will not recognize these and thus is likely to be unnecessarily exposed. If an accident occurs, and accident control operations are not properly conducted, radioactive contamination may spread rapidly, even to the extent of causing hazards to personnel remote from the scene. The RPO is trained to guide emergency operations in a manner that will assure proper control of radiation hazards, including contamination.

The employee responsible for the use or storage of the radioactive material involved should be able to furnish additional information regarding the type and location of the radioactive materials in the area. His phone number, as well as that of the RPO, must be readily available.

At locations where radioactive materials are present, the phone number (installation and home) of the RPO and the area supervisor should be posted along with instructions that they be notified immediately in the event of an emergency.

The installation and home phone numbers of the RPO should be furnished to the safety, fire, and guard departments. The installation duty officer and the telephone operators, because of their central position in the installation communications set-up, should have the RPO's phone numbers immediately available. This will allow them to reach the RPO in response to an emergency call either from the installation or from outside the installation.

A section devoted to emergency phone numbers should have a prominent place in the installation telephone directories.

Response to a radiological emergency should also be incorporated into the outline for disaster plans given in Section 4, AMCR 385-224.

Keep track of your RPO's phone number. It's a good one to know!

* * *

AMC SAFETY SCHOOL INSTRUCTORS KEEP INFORMATION CURRENT

The instructors at the AMC Safety School keep their teaching materials current by study of current practices and developments at AMC installations. The photograph above shows Charles O. Crozier (left), a recent addition to the AMC Safety School staff, with Harry J. Romer, a Safety Officer at Lone Star Army Ammunition Plant. Mr. Romer and James W. Graves, Chief of Safety (COR) provided orientation during Mr. Crozier's visit. Day & Zimmermann, Inc. is contractor-operator of Lone Star Army Ammunition Plant.

Mr. Crozier is a chemistry and education major graduate of Michigan State University. He began his Army career as a chemist at Rock Island Arsenal. Before moving to the AMC Field Safety Agency he worked at Letterkenny Army Depot and Savanna Army Depot, where he was an instructor in ammunition and guided missiles.

NEW SPEED FOR AIR CRASH RESCUE

James Alcorn, Fire Chief
Dugway Proving Ground

Dugway Proving Ground has received the first PKP and Light Water Fire Truck designed for Army airfield use. This is a 4-wheel drive, 3/4-ton truck with 400-pound sphere of "Purple K" (potassium bicarbonate base dry chemical) and a 50-gallon sphere of "Light Water" (fluoro-chemical surfactants plus polymer) (Photo 1).

With the new unit, a 2-man crew dressed in aluminum proximity suits can move in on an aircraft fire, blanket 1,200 square feet of high test gasoline or jet fuel with foam and rescue the pilot.

This method has greatly simplified fire fighting techniques. Upon arrival at the crash site, the hose man grabs the twin-gun (or nozzle) hand-held unit, and uses it as a yoke to draw the two 1 1/2 inch hoses to the fire. Meanwhile, the driver opens the 3 quick-acting nitrogen valves at the back of the truck. This pressurizes the 2 agent tanks and drives the chemicals to the hand-held unit. The driver is then available to help drag the hose lines and move in for the rescue operation. (Photos 2 and 3.)

The hose man, in the meantime, has foam blanketed the area, cooled the cockpit area, and held the fire back during the rescue. This is also possible as a one-man activity, due to the healing properties of this particular type of foam and chemical over the footprints and hose line tracks. The driver, following his rescue of the pilot and crew, is available for first aid assistance or to return to fight the fire. The larger fire trucks and ambulance may still not have had time to reach the fire site. Mission accomplished -- 20 seconds plus entry time.

The 400-pound (50-gallon) combination of chemicals has been tested as the equivalent of 200 gallons of protein foam, covering a 1,200 square foot area (1800 BC rating). The 2 chemicals are individually controlled by pistol-type triggers and can be used singly or in compatible combination.

The light weight and small physical size of the 400/50 chemical-fire-fighting unit has made it suitable for mounting on a standard 4-wheel drive 3/4 ton pickup truck. This makes it available for quick trips to the fire over extremely variable terrain.

The Dugway Proving Ground Fire Department has recently used the apparatus in a simulated fire run from the fire station near the hangar, out along the taxiway, down the 8,000-foot runway and 100 yards into the brush and sand in one minute and 50 seconds. the 4-wheel drive truck has excellent clearance over rough ground and brush and good traction for nearly any type of surface. In addition the truck has a bumper winch for emergency situations in rough terrain, for moving aircraft wreckage and for assistance in wreckage entry.

The crash and rescue truck and its big and little brothers seem to have excellent potential for further development and for use at Army airfields. It seems ideally suited to both large and small fields, particularly where vicinity crashes are common occurrences. Another feature of high potential is that the PKP-Light Water unit can be mounted on skids and used in almost any type of tactical vehicle or trailer. The unit may even have potential for mounting in a helicopter to reach crash sites in deep woods or mountains.

Photo 1

Photo 2

Photo 3

CAUSES OF BATTERY EXPLOSIONS

During the past few months there have been numerous reports of batteries exploding. These are not as rare as we presume. A fully charged battery or one being charged generates "hydrogen gas." As little as 4 per cent in a mixture of air can be explosive. Some erupt with great force while others might just "blow their tops."

The acids from an exploding battery can cause painful and damaging injuries---especially if the face or eyes are involved. Abundant amounts of water should be applied to the affected areas with prompt medical examination as a "must."

Some of the causes for battery explosions are:

1. Installing a new or fully charged battery in a vehicle with some switches on or by "crossing" the cables.

2. A battery post, broken inside the case, can cause an internal explosion upon fastening cables or even by movement of the vehicle.

3. Filling a warm battery with distilled water can generate enough gas to explode if a spark is present.

4. Checking the water level of a battery with a match.

5. Testing a battery with pliers or steel prods.

6. Before using a voltmeter for a battery check, always ventilate the battery. Since hydrogen is a very light gas, it will dissipate in a few seconds.

7. In connecting a battery to a charger, be sure all connections are tight before turning on the charger. In taking it off---always turn the charger off before disconnecting the battery.

8. When working on a vehicle, always be careful of tool placement or movement near the battery or battery connections to starter, solenoid, generator, regulator, etc.

9. In using "jumper" cables to start a vehicle take these precautions:

   a. Be sure of the polarity of both batteries.

b. Be sure all switches of the vehicle you are starting are off.

c. Use a solenoid switch between the batteries and be sure all connections are tight.

10. A shorted or broken plate in a battery can cause an explosion when hooked to a "jumper" battery.

Always ventilate a battery before working on it and wear protective devices at all times. Never wear rings on your fingers---they get real hot if the battery shorts through them.

Fleet Safety Newsletter
National Safety Council
April 1967

* * * *

LEARN TO INSPECT MOTEL POOLS

Parents planning motor trips this summer should learn how to appraise motel pools before allowing their children to paddle around in them. They can get this information from a new pamphlet, "How Safe are Motel Pools?" This is a U.S. Public Health Service study of 53 motel pool fatalities reported during 1965.

The main factors contributing to the drownings were found to be:

1. Absence of adequate protective barriers around the pool.

2. Absence of lifeguards or qualified adult supervision.

3. Disregard for the rules of good pool conduct.

4. Failure to teach youngsters drowning prevention knowledge and skills at an early age.

A limited number of copies of the pamphlet are available upon request the the Injury Control Program, National Center for Urban and Industrial Health, 800 North Quincy Street, Arlington, Virginia 22203.

POOR SPOT PICKED FOR QUESTION

At 0600 hours the operators of 2 forklift trucks stopped for a work break. They drove to the end of the warehouse, parked thier machines about 4 feet from the wall, left the motors running, and took their break.

After the break ended, a third employee walked over to address a question to one of the operators. The 2 men stood behind the forklifts while they talked. At this moment the second operator thought that the motor of his machine was about to stop. He moved to its side and depressed the throttle with his hand. The engine accelerated and the forklift started to move backward toward the wall.

The man with the question tried to jump out of the way, but he was too late. The machine struck his side and pushed him against the wall. He remained pinned there until the operator mounted the forklift, moved the shift lever, and drove the machine forward. The freed worker received a fractured pelvis, and he was expected to be away from work for 30 days.

OBSERVATION POINT WAS TOO CLOSE

Three soldiers and a civilian helicopter pilot met at a standby point on a recovery mission that involved a Hawk missile and a drone. Just before the time the launch was scheduled they moved into the open and faced the direction of the launching site. The helicopter, vehicles, and a fenced-in storage building were near at hand on their right side.

The missile was launched on schedule. The watching men soon spotted it and the drone target. At first it appeared there would be an air interception, but the missile missed and went into a dive. Then it appeared to be coming directly toward them. The men held their position, because they believed the missile would impact and detonate at a safe distance from them. Their belief soon seemed to be correct, for the missile did strike the ground and detonate about 1,000 yards away.

At first there was no sound of any fragments coming their way. Then they saw a fast moving object skipping along the ground in their general direction. They lost sight of it for a split second. When they spotted it again it was headed directly toward them.

One soldier shouted a warning, and the 4 men sought shelter as might be available behind the vehicles and helicopter. As they ran one man heard the object strike a strand of the barbed wire fence. From there it flew beneath the tail section of the truck and struck a sergeant on the lower calf of his right leg. The object, later identified as a hydraulic accumulator, continued moving and came to rest 150 yards away.

The other men turned to the assistance of the injured sergeant. An ambulance was summoned and he was moved to a hospital. Both the fibula and the tibula of his left leg were found to be fractured. It was estimated he would be off duty for 35 days.

It was found that the injured sergeant had been 3,005 feet away from the missile's point of impact. The incident showed the standby site was too close to the predicted impact area. To prevent similar accidents the standby site was moved to a point at least a mile and a half perpendicular to the predicted impact area on the line of flight.

MACHINE SEIZES REPAIRMAN

The hydraulic equipment repairer leader was requested to install a switch that would shorten operating time and obtain more precise control on a tape control drill press. Before he gave instructions on the job to one of his men he decided to simulate the function of the switch that would eliminate the need for the turret slide to return to its zero position.

When the machine operator finished work on a piece of work the repairer leader instructed her to dial in the turret spindle offset procedure. He then climbed upon the machine table where he could reach the microswitches that controlled the turret slide. With his left hand he reached into an opening and depressed the switches. This took them out of the operating circuit and prevented the slide from returning to its home or zero position.

His hand slipped off one of the switches he was holding down. This permitted the activation of the turret slide. It moved toward its home position. Before the worker could remove his hand it was caught between the top of the slide and the machine frame that inclosed it. There his hand was held by the machine.

The repairer leader directed the operator to put the drill press into manual control and to depress the "down" button. She did this. The turret slide moved, and the hand was released.

The man climbed down, wrapped his injured hand in a handkerchief and started for the dispensary. He was taken promptly to a hospital. It was found that his index finger was severely smashed and dislocated. Tendons on the back of his hand had been cut, one bone had been fractured and the palm and third and fourth fingers were lacerated.

The man was absent from work for 2 days before returning with his hand securely bandaged and his arm in a sling. One of his early assignments was to conduct employee safety meetings.

Other actions to prevent similar accidents included the following:

Specific instructions were issued on the procedures to be followed when work was done on tape controlled machines.

Investigation revealed that the operator had failed to place the closely spaced shift lever of the automatic transmission in the neutral position. He had also failed to set the parking brake firmly.

Meetings were held for all forklift operators and truck drivers. Special emphasis was placed on the operating rules set forth in TM 743-200 and the operators' manuals. It was emphasized that forklifts should not be parked and left with the engines idling. The workers were also reminded that they were exposed to machine movement and carbon dioxide hazards when they stood in a confined space near operating materials handling trucks.

Special safety rules were prepared for use as a positive guide for all forklift operators and drivers.

FOOT DIDN'T KNOW WHAT HAND WAS DOING

An Army employee was working alone in a bay, placing ignition cartridges and primers in 60mm mortar rounds. In his work he picked up a round from a belt conveyor and placed it in a fixture on a foot-controlled pneumatic vise. While he held the round in place with his left hand, he used his right hand to insert the ignition cartridge and primer into the fin assembly. (See Photos 1 and 2.)

All went well until the worker inadvertently touched the control pedal with his foot. This actuated the vise at a moment when he was holding a round in place on the fixture. The movable part of the vise came forward and caught the end of his first finger on the left hand. The pressure amputated the end of the finger.

To prevent similar accidents all foot-controlled vises were removed from the operating lines and replaced with hand-operated vises. The new vises had guards over their tops. These vises cannot be actuated until an operator was completely closed the guard.

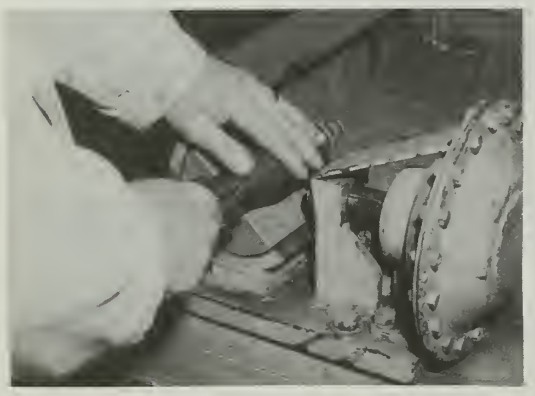


Photo 1

Photo 2

A guard was bolted over the machine opening through which the employee had reached. Repairmen were given instructions that the cover could not be removed until the machine's power had been locked out.

The accident was publicized throughout the installation. Emphasis was given to the rule that no repair work should be performed on any machine while the power was on.

FOR WANT OF A PIN

A monorail supported a strapping machine and its mounted counter balance and pivot arm. An ammunition worker used the machine to band a pallet of boxed rockets and then started to move it to another location. As he was moving it a supervisor walked under the section of the monorail from which the mechanism unit was suspended. Without warning the mechanism fell, and the arm and balance struck the man. He received a lacerated scalp, a left flank contusion, and a fractured pelvis. It was estimated he would be away from work for 4 months.

The ammunition worker escaped injury, and the machine was not damaged by the fall.

Upon investigation it was found that a missing 3/16-inch by 1-inch roll type safety pin had permitted the machine to fall. The entire mechanism had been secured to a 4-wheel monorail dolly by a 1-inch threaded pivot bolt. The bolt was designed to be secured by the safety pin, inserted in a hole drilled on the center line of the mating threads and parallel to the bolt. This pin was missing, and the bolt became unscrewed through the normal use and turning of the jib arm.

Use of the equipment was discontinued until a fail safe attaching device could be developed and installed.

USE YOUR SAFETY KNOW-HOW

Arthur Crook, Safety Officer
Joliet Army Ammunition Plant

Accident records reveal a very interesting fact. Almost without exception occupations in which there is a high degree of danger have better accident rates than those which are considered "safe." For instance, an AMC employee is about 7 times less likely to receive an injury at work than a worker in the food industry.

There are probably many reasons for this. However, we in the safety business know that a good safety record is mainly the result of a good safety program. Being aware of what could happen, we strive continually to prevent even the smallest deviation from proven safety practice. The 3 E's of Safety, Engineering, Education, and Enforcement, are part of our life.

I wonder though if we give much thought to safety when we leave the plant.

Do we use our safety know-how to protect ourselves and our families during the hours away from work?

Do we engineer our tasks at home to eliminate hazards? Are our ladders and electrical appliances inspected frequently? Do we check for tripping hazards? How do we store paint, detergents, polishes, and medicines?

Do we use our safety education to the fullest and do we educate our families to act safely?

Do we enforce safe practices at home? Do we assure that our children always "buckle up for safety?" Do we teach them to obey traffic laws and to walk not run up and down stairs?

Much work time of AMC personnel is devoted to safety. We as employees of AMC are as well educated as any other military personnel. We are foolish indeed if we do not use this knowledge to protect ourselves and our families from harm all the time.

OFF-THE-JOB SAFETY PROGRAM

The following off-the-job safety program may suggest ways to improve your program. It has been extracted from the calendar year 1967 Master Safety Program of the Thiokol Chemical Corporation, Longhorn Division, Longhorn Army Ammunition Plant.

1. INTRODUCTION.

a. Purpose

To reduce the number of off-the-job accidents involving employees and their immediate families through an active, continuous off-the-job accident prevention program.

b. Objectives

The objectives of the off-the job safety program, like those of the plant safety program, are as follows:

(1) Improve employee morale through prevention of off-plant accidents.

(2) Eliminate absenteeism by preventing off-the-job accidents which result in injury to the employee or members of his family.

(3) Improve efficiency of employees as a result of reducing injuries occurring in off-the-job accidents.

(4) Participate in local civic safety affairs as a contribution to community welfare.

Most important is the fact that we are dealing with our prime resources and greatest asset---our employees and our friends. For humanitarian reasons alone, accidents must be prevented.

c. Scope

This program is in compliance with AMCR 385-224, paragraph 126, and is conducted in accordance with

APSAR* 385-1 in conjunction with the format of the National Safety Council.

d. Contents

This program shall cover safe driving, fire prevention, home safety, recreational and vacation safety, first aid, and other off-the-job exposures. Through the use of educational materials, instructions, training, and other devices, secure the interest and participation of employees, maintain their interest, and create a favorable attitude toward safety everywhere.

2. THE PROGRAM

The off-the-job safety program started on 1 January 1967 and will continue throughout the year. A continuous effort on the part of safety and supervisory personnel will be made to present to employees the hazards present in and around the home, on the highways, and seasonal hazards; i.e., sports, winter driving, water safety, etc.

a. Maintaining Interest

(1) Safety Grams, pamphlets, booklets, and other material will be mailed to the employee's home at designated intervals.

(2) The "Family Safety Magazine," published quarterly (March, June, September, December) by the National Safety Council, will be sent to each employee's home.

(3) Upon request, visual aids from our own film library are available for civic meetings on a loan basis.

(4) Furnish speakers from Safety Section for schools, churches, or civic groups upon request.

(5) Furnish safety check list for home.

*APSA is an abbreviation of U.S. Army Ammunition Procurement and Supply Agency.

(6) Establish and conduct first aid training classes for employees.

(7) Publish off-the-job safety material for use in safety meetings.

b. Compile Statistics

(1) Maintain records, by months, of all lost-time "off-the-job" accidents.

(2) Prepare quarterly summary of above lost time for the National Safety Council.

(3) Publish statistics for employee's information.

(4) Relate unusual off-the-job accidents.

(5) Provide special emphasis information for off-the-job safety during holidays and seasonal hazards or exposure.

* * * * *

AMC COMMENDATION FOR SAFETY

The Granite City Army Depot was awarded an AMC Commendation for Safety for its achievements in preventing accidents and maintaining a sound safety program in FY 1966. In the picture above COL Charles E. Hoskin, III, Depot Commander (left), is shown accepting the award certificate from COL Elbridge L. Snapp, Assistant to the Deputy Commanding General, Army Materiel Command.

COUNT YOUR SAFETY PROGRAM RESULTS

Do you sometimes feel a bit frustrated because you cannot measure your safety program results in tangible terms? The following article, extracted from "Pete's Letter to Supervisors" at Aberdeen Proving Ground, may show you a way to cure that feeling.

By using a bit of mathematical skullduggery and some National Safety Council figures, I estimated that at APG during the last half of calendar year 1966 instead of having only 3 disabling injuries, we would have had 88 disabling injuries if we had an average American industrial safety program! I reduced this record to dollars and cents and found we had avoided about $120,000 in direct accident costs. Look at the record in terms of avoided injuries with their accompanying pain, crippling effects, regret, and sorrow. I'll leave it up to you to visualize the blinded eyes, the missing fingers, the stiffened knees and broken feet that did not result from these 88 injuries that did not occur.

Here is the list of avoided injuries:

Eyes	3 probable injuries
Head, except eyes	5 probable injuries
Arms	7 probable injuries
Hands	5 probable injuries
Fingers	15 probable injuries
Trunk of Body	24 probable injuries
Legs	11 probable injuries
Feet	6 probable injuries
Toes	4 probable injuries
Miscellaneous	8 probable injuries
	88 probable injuries

All this leads up to my clinchers. Injuries can be avoided. Your effectiveness as a supervisor can be measured in terms of the number of unscarred, uncrippled, unmutilated men in your work crews. Your safety work has been effective. You can and should be proud of this accomplishment!

Continued on page 25

EXERCISE MORE SAFETY PROGRAM LEGS

Larry E. Morgan, Safety Assistant
Rock Island Arsenal

In recent years accident prevention program results have tended to level off. Instead of attaining a continual decrease in accidents, the organizations are likely to hold their own without showing a progressive and significant downward trend in accidents and injuries.

In many instances this static condition may be due to one of the following causes:

1. An effort is not made to secure the maximum benefits that may be obtained from the safety man and the safety program.

2. Something may be wrong with the methods used in the effort to get results through the safety man and the safety program.

One set of actions may go far toward correcting these 2 weaknesses. We can look at the methods being used, analyze why they are not continuing to reduce the number of accidents, and make changes that may again start accident rates downward.

Engineering and inspection are the sturdy legs on which many safety programs stand.

A complete safety program has additional elements. If these exist on paper but are not put into practice they are not truly a part of a safety program. Effective efforts to implement additional elements will produce a more productive safety program.

The worker must be reached and converted into a safety-minded individual. Engineering and inspection do not change the employee's attitude, because strict utilization of these methods does not bring the safety man into sufficient contact with the employee, or cause the employee to become a worker for safety.

Editor's Note: Mr. Morgan was a member of the first class (1965-66) to complete the AMC Safety Career Management Intern Training Program at the AMC Field Safety Agency.

Engineering and inspection, supplemented with training, promotion, and committee activities, will bring the employee into the working safety team. A safer worker will be produced.

The following examples show how the employee can be reached:

1. Promotion - His interest must be aroused if the employee is to be reached. Although this may be no easy task when safety is mentioned, there are many ways to accomplish it. Companies with products to sell catch your attention every day by their advertisements. Similar ingenuity can create an interest in safety. Examples are the "Safety Theater" explained in the July 1966 edition of the Safety Digest; posters that show fellow employees who have been protected from injury by safety equipment; the safety telephone used to convey a daily safety message or details of an accident to employees; and awards presented for individual achievement in the field of safety. (Don't misuse or over use safety awards. Make them recognition of the employee's achievement, not of his existence.) In too many cases the promotional phase of a safety program consists entirely of passing out safety publications. More than distribution of paper is needed if safety is to be promoted effectively.

2. Training - The employee is often "talked to" in safety training rather than "involved with" it. To benefit from training he needs a desire to learn how to make himself a safer worker. It may seem difficult for a safety man to teach his own local employees, especially when there is a need for professional training techniques. This problem may be alleviated by using the services of his organization's training personnel. Outside agencies may also be available upon request to provide some training. Regardless of the source from which training is obtained, the main thing is to get it started and keep it going. Recognizing the need and then taking no action will not prevent accidents.

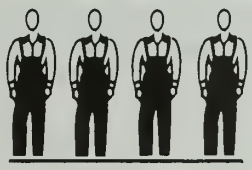
3. Committee Activities - Many safety men may feel that they are not lacking in this phase, but if their "committee activities" have become "safety meetings" they may be deficient. The safety meetings do involve safety matters, but very seldom does the worker get a chance to do actual safety work that flows from the discussions in safety meetings. Committee activities with safety included do give the employee an opportunity to improve working conditions through inspections and campaigns and involves him with work in the safety field.

There may be many reasons why the local safety program has not developed the elements of training, promotion, and education, and committee activities. The major ones are likely to be these:

1. Safety directors are satisfied with the methods that have become habits. They do not wish to depart from routine and venture into new areas.

2. These new areas are difficult ones in which to work. The most difficult problem is to modify the habits and attitudes of individuals. The physical parts of a building or a line layout, and guards on machines are engineering problems. A worker must be so well indoctrinated in safety that he will guard himself against hazards.

These are techniques to bring into use the more "legs" on which a new action safety program must stand. These methods may already be talked about, written about, and even used in a roundabout way. Until they are applied as an integral part of the accident program, the worker will remain a somewhat bored spectator. Before the frequency rates begin a downward trend, employees working for safety must become the foundation of the safety program. The methods outlined here will increase progress toward that goal.



Continued from page 22

The record of "avoided injuries" at APG should be paralleled by a similar record of avoided military injuries and avoided Army motor vehicle accidents. It can be done and must be done primarily by effective supervisors.

The excuse for accidents that - "We are different" - is as weak as a waterlogged noodle and as time worn as King Tut's shoelaces.

- Pete's Letter to Supervisors
Aberdeen Proving Ground

OFF-POST SAFETY - VIET NAM

Thomas P. Browne, Safety Director
Headquarters, 1st Logistical Command
AVCA GP-S
APO San Francisco, California 96307

In a little village on the outskirts of Saigon 30 families and about 120 small children have for years drawn their drinking water and washed their clothes at the pit well in the street. (See Photo 1.) Their water source was crude, unsafe for small children, and unsanitary.

The Medical and Safety Directors, Headquarters, 1st Logistical Command, Viet Nam, decided to correct this unsatisfactory condition. In a letter to his wife the Medical Director asked that she try to locate a hand-operated water pump. When she could not find one, she turned to a local television newscaster for help. He included a story about her unsuccessful search in one of his news programs. The broadcast was heard by a rancher, who donated a pump.

The pump was shipped to Viet Nam and installed as a joint effort of the Safety Director and the Medical Director. A 2-foot high mahogany mounting with sheltered roof eliminated the falling, tripping, drowning, and unsatisfactory sanitary conditions which existed previously. (See Photo 2.)

The villagers greeted the new convenience with great interest and enthusiasm. The war may last a long time but an old fashioned water pump eliminated the unsafe condition which eventually might have been fatal to a Vietnamese child.

Photo 1

Photo 2

DO YOU MISS THE POINT IN NEAR-MISS ACCIDENTS

Close calls or near-accidents are deserving of more attention than they get.

When a near-accident occurs, all of us are usually motivated into some sort of action. What kind of action and approach depends on how much importance each of us places on observing safety rules and regulations.

As a supervisor you may have observed a near-accident occur in your shop. What did you do about it? Did you walk away thanking your lucky stars it was a near-miss with no injury? If you are conscientious, you will get a feeling that you should have done something. Since you do believe in safety rules and regulations, you know you should take some action. What are you going to do?

Should you tell the employee or employees involved that they were lucky with a near-miss? Perhaps you should simply give the employee a warning in order that he will use more care in the future. Maybe you could do a little more.

You could assemble the group involved and point out that a near-miss could have had serious consequences. Advise them also that the incident might have happened to anyone in the group unless they observe safety precautions. At this point, a safe way of performing the job should be demonstrated.

How would you handle this problem? What approach would you use? I believe the last approach to be the most effective way of getting your thoughts across to the people involved. By handling the situation in this manner I am sure you will receive the fullest cooperation of your people.

Near-accidents and frequent minor accidents invariably lead to serious or lost-time accidents. So it stands, the more effective your program in handling these close calls, the better your safety record.

This article was extracted from the Thiokol Safety Report, issued by the Longhorn Division, Thiokol Chemcial Corporation, Longhorn Army Ammunition Plant.

EYE CATCHER CREATES CONTEST INTEREST

If you want your personnel to participate in your safety contest, you must first get their attention.

When Aberdeen Proving Ground wanted to call attention to its "Safety Hazard Exhibit" contest, it used large photographs, including one of a pin-up girl. The eyes of every person who came near were drawn to the exhibit. The contest was off to a good start.

Limits to the effectiveness of safety contests are the extent of the ingenuity of those who plan them and the thoroughness of their planning and follow-through. The Aberdeen Proving Ground "Safety Hazard Exhibit" is an example of a well planned and well executed safety contest.

The steps the installation took to make the contest effective included the following:

1. One individual was responsible for planning and follow-through. Although a committee might be given this responsibility, it is essential that the responsibility be firmly placed from the start. If this is not done, events are likely to drift aimlessly.

2. A plan for the contest was developed. The plan called for an eye-catching exhibit that would create interest.

3. A memorandum (Disposition Form) on the proposed contest, signed by the Safety Director, was forwarded to the installation Commander. It stated the purpose of the proposed safety contest, described it briefly, listed prizes and their cost, and requested approval. The Commander gave his approval.

4. Purchase of the contest prizes was requested by another Disposition Form. The most expensive prize, a small camera, cost about $10. The total for all the prizes was under $40. (Editors note: Paragraph 13, AR 385-10, Change 1, 30 September 1964, provides for budgeting for promotional items. With the approval of the Commanding Officer, non-appropriated funds may be used.)

5. A press release on the contest was issued, and publicity was obtained from the civilian enterprise newspaper that is read by personnel of the installation.

6. The display was installed. It included the eye-catching picture, the prizes that were to be awarded and that hazards that were to be named by the contest participants.

7. A flier to advertise the contest was prepared and arrangements were made for its distribution with the daily bulletin.

8. Contest rules were posted. These made clear who was eligible to participate, the closing date and how to compete. Since the contest required counting the number of safety hazards, a safety hazard for contest purposes was identified and an example was given.

9. Entry blanks were made available at a spot near the display. These provided a space for listing the number of hazards counted, date, signature, address, and telephone number.

10. The contest attracted keen interest and many entries. To determine the final winners, the individuals with the best scores were asked to identify the safety hazards associated with certain items. The invitation to do this was extended by means of a letter signed by the Deputy Commander.

11. Entries were judged and awards were presented by the Deputy Commander. A picture of the winners receiving their prizes was published in the newspaper.

12. The experience gained during the contest was reviewed and lessons learned were summarized for future reference. These included the following conclusions:

a. The display should be located in a prominent place and should include an item that would attract attention. The enlarged photograph of the pin-up girl was an example of an eye catcher.

b. In a contest of this sort the number of "safety hazards" should not exceed 50. If the number is larger, an excess amount of time may be required to study them, and this may discourage participation in the contest.

c. Before a contest is started, the "final judges' decision" list of "safety hazards" should be prepared. This should consist of hazards the average person should be expected to note. Omit remotely possible hazards or rule violations that only a safety expert might be expected to find. Advertise the fact that only definite and obvious

hazards will be counted, that no assumptions are necessary, and that there are no hidden tricks. To count a hazard that does not actually exist in the display is as much an error as overlooking one that is there.

d. After winners have been selected, the list of answers used by the judges should be posted with the display. This will provoke additional interest, because people will want to compare their judgment with that of the judges. To forestall disagreements with the judges' decision this list should contain a note such as the following: "Additional hazards of varying degree may exist with many of the items displayed. However, in the opinion of the judges, the above list includes all the obvious hazards the average person could be reasonably expected to notice."

GUILTY OR NOT GUILTY

J. J. Murphy
Rock Island Arsenal

"Familiarity Breeds Contempt"

Most of us have used this maxim many times. Conveniently, however, we tend to apply it to others rather than to ourselves. For example, it is easy to think of a person who has been operating a lathe or a saw over a period of 10 or 20 years, as being insensitive to the hazards involved. But how about the operation or area you have inspected 10 or 20 times. Would you say that the maxim applies?

Why do we inspect? A prime reason is to detect and identify conditions which have caused or may cause injury. You may have many of the qualifications generally listed as being necessary for a good safety inspector; interest, enthusiasm, knowledge about safety rules and standards. Your downfall as an inspector may be the lack of the most important of all -- an open mind. Do you really have one? Are there any operations or areas you inspect with the thought there are no unsafe acts or conditions to be found? To be sure you are not guilty on your next inspection, pick an area that up to now you have felt is a pretty safe one. Give it a real going over. You may be amazed at some of the things you find.

As a quick test make an inspection of your own office with the thought that there is something there that could result in an injury. When was the last time you really looked? Try it.

THREE EXPLOSIVES OPERATIONS DISCREPANCIES TO CORRECT

In this period of large scale operations involving explosives and ammunition it is essential that basic safety methods be practiced. It is unfortunate that full use is not always made of the lessons taught by experience. The following article, extracted from material that appeared in the September 1963 Safety Digest, is published to remind you of 3 hazardous conditions that exist all too often. These can and should be found and corrected.

Everyone associated with explosives operations should appreciate the hazards that are present. The people involved should have been trained, instructed, advised, and reinstructed in every phase of the particular operations they peform. However, inspections, and review of accident reports, reveal that discrepancies are still discovered.

Let us review the 3 types of discrepancies most often reported after a thorough inspection.

1. The most prevalent discrepancy is that "the operation is not being performed in accordance with the instructions and methods set forth in the standing operating procedure." No deviation is permitted from an explosives operation procedure (the standing operating procedure) without the specific approval of the Commanding officer or his designated representative. No inspector should accept the alibi, "I was told to do it this way." Any change in operating procedures that permit a deviation must be in writing, and must be made an addendum to the posted copy of the procedure. To violate a standing operating procedure or to permit a violation jeopardizes not only those willing to take a risk, but also everyone else directly associated with the operation. In addition, Government property and equipment are exposed to potential damage/or destruction.

It is one of the basic responsibilities of the supervisor to require adherence to the standing operating procedure. A statement that, "I didn't know he was doing it that way," is no relief from responsibility. The supervisor's job requires that he know what is going on. In work dealing with explosives, this knowledge is of paramount importance.

2. The second most prevalent discrepancy is "inadequate standing operating procedures." Examples are lack of procedures for disposition and/or storage of rejects generated during an operation; no explosive limits posted at a packing operation; and instructions in the standing operating procedure that do not clearly spell out each operation performed during a series of successive operations. To keep standing operating procedures up-to-date, and to incorporate required changes, periodic review of all procedures is required. Inadequacies should become apparent at that time.

3. The third most prevalent discrepancy reported is that "the posted standing operating procedure is for an operation other than the one being performed." This discrepancy reflects lack of planning, inadequate supervision, and operator failure. Any one of these can result in disaster.

Other types of discrepancies may be discovered by a safety inspector. These may involve explosives handling, quantity-distance, additional operations not mentioned in the standing operating procedure, and lack of adequate protection.

Everyone who has anything to do with ammunition or explosives should remember one basic, simple rule. Respect the material with which you are working. If you lose that respect for one moment the result may be undesirable and disastrous. Don't let it happen to you!

CONCURRENT OPERATIONS

The practice of designating a single operating line for the individual performance of ammunition normal maintenance modification, renovation, or demilitarization operations is of long standing. The availability of facilities and increased work loads sometimes make necessary the reconsideration of this practice. If necessary, concurrent operations are permitted by paragraph 2502, AMCR 385-224.

Concurrent performance of different operations in individual buildings of a single operating line or concurrent performance of operations on more than one item in a single building makes safe operation more difficult to achieve. Additional hazards may include dissimilar physical and chemical properties of the items being processed, congestion caused by an uneven flow of material and the crossover of materials and components.

The introduction of additional operations or items also increases the number of operating personnel necessary. This makes injuries more likely because of the increased exposure to accident producing situations.

Lacking facilities which permit the assignment of different items to separate buildings, there may be a temptation to turn to concurrent operations without adequate regard for the potential hazards involved. Premature acceptance of an operating plan may involve failure to consider the need for the following:

1. Safe segregation of hazardous supplies.

2. Separation of personnel processing one item from the nazards of processing another item.

3. Operational shields for the purpose of confining or isolating the results of a premature initiation.

4. Evaluation of proposed operations to assure that relatively insensitive items will not be processed concurrently in the same building with sensitive items or items possessing questionable characteristics. (If this is done the quantities involved should be strictly limited and necessary added safeguards should be provided.)

To implement the basic explosives safety policy of exposing the least number of people, to the smallest quantity of explosives, for the shortest possible time, maximum use

should be made of:

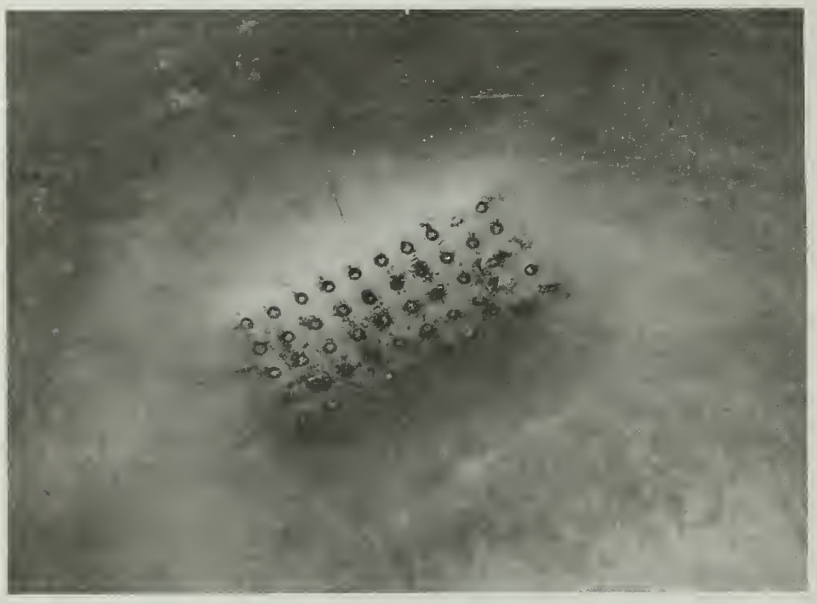
1. Substantial dividing walls to separate individual operations, of both similar and dissimilar types, thus reducing unnecessary damage to equipment and injuries to personnel in the event of an explosion.

2. Operational shields to protect the person performing the operation, as well as other personnel and equipment expected to sustain injuries and damage in the absence of operational shields.

3. Mechanical handling devices and equipment to reduce exposure and associated with manual handling of ammunition and to enhance materiel flow, thereby increasing safety and efficiency.

^^^^

CAN YOU IDENTIFY THIS ?



Can you identify the object pictured?

Here is a hint. It should help make clear the reason why explosives safety receives such constant emphasis from AMC safety personnel.

If you do not know what it is, turn to page 35 for the answer and another picture of the scene.

HERE IS THE ANSWER

The picture on page 34 showed a section of an aluminum table top after an explosion of 50 M55 Stab Detonators in a cardboard packing tray. The picture above shows the scene soon after the explosion. Some of the 50 pockmarks in the metal may be seen through the shield.

A female ammunition worker was performing a visual inspection of the detonators. The tray was sitting flat on the table behind the shield. The explosion occurred while she was in the act of placing an acrylic plastic turning block on top of the tray.

The shield provided protection for the worker's face and trunk. She was disabled by severe explosive trauma, injuries to both hands, and injuries (including fractures) to her left wrist and arm.

To prevent such incidents, detonator trays and turnig blocks should be fabricated from conductive materials rather than dielectrics such as acrylic plastic.

Here are 10 questions that will test your knowledge of safety requirements that you will need under different circumstances. The answers to all of them may be found in AMCR 385-224. How many can you answer without referring to the regulation? The correct answers and references appear on pages 39 and 40 .

1. May 2 heat sealing machines be used inside one explosives operating room?

   Answer and reference:

2. Is sand blasting an approved method of cleaning JATOS?

   Answer and reference:

3. Under what circumstances may repairs be made to the interior of a magazine that contains bulk explosives?

   Answer and reference:

4. Is there a single type of magazine that may be used for the storage of all items of ammunition or explosives?

   Answer and reference:

5. May process steam used in the manufacture of explosives exceed the 5 psi maximum pressure that is permissible for use in heating operating buildings that contain explosives?

   Answer and reference:

6. How far apart are the posted signs that show an area is a Government reservation and warn against trespassing?

   Answer and reference:

7. Should a sportsman permitted to hunt on an Army installation be required to obey hunting regulations of the state in which the installation is located?

   Answer and reference:

8. In degreasing operations where chlorinated hydrocarbons are used, what hazard is created if water and moisture is allowed to get into the degreasing agent?

   Answer and reference:

9. What hazard is created if a cylinder of compressed oxygen leaks in an area where oily materials are present?

   Answer and reference:

10. Should the stopper of a carboy of acid ever be loosened before a start is made on use of the contents?

    Answer and reference:

REFERENCE PUBLICATIONS

AR 50-2, 6 April 1967
Nuclear Weapons - Accident and Incident Control (NAIC)

AR 95-6, 7 April 1967
Aviation - Release of Information to Relatives of Persons Involved in Aircraft Accidents or Incidents

AR 385-17, 28 April 1967
Safety - Fire Extinguishers for Rail, Marine, Amphibious, and Off-the-Road Equipment

AR 385-62, 17 April 1967
Safety - Firing Guided Missiles and Heavy Rockets for Training, Target Practice, and Combat

AMCR 50-2, 13 April 1967
Nuclear Weapons Surety Program - AMC Nuclear Weapons Surety Program

AMCR 385-2, Change 2, 27 March 1967
Safety - Accident Reporting - Routing of Required Reports

AMCR 385-5, 15 March 1967
Safety - Safety Awards Program

AMCR 385-8, 12 April 1967
Safety - Safety Promotional Material

AMCR 385-10, 13 April 1967
Safety - Safety Training in Civilian Institutions

AMCR 700-52, 15 March 1967
Logistics - Nuclear Weapon Maintenance and Storage Operations

DA Cir 40-33, 8 February 1967
Medical Services- Prevention of Heat Injury

DA Cir 40-34, 15 March 1967
Medical Service - Ambulance Service for Dependents

CPR CP12, Change 3, 7 April 1967
Army Civilian Career Program for Safety Management

"WELL... DID YOU KNOW?

Here are the answers to the questions on pages 36 and 37. All questions were based on information contained in AMCR 385-224. A reference to the pertinent paragraph follows each answer.

1. Heat sealing equipment should be limited to one machine per operating room, bay, or cubicle. Reference: Paragraph 2623.

2. No. Because of possible hazards resulting from hidden explosives, thin or eroded cases, and certain characteristics of explosive filler, sand or shot blasting of such items as thin cased chemical-filled bombs, torpex-filled depth bombs, thin-cased depth bombs, thin-cased land mines, rockets, JATOS, and fixed rounds of ammunition when assembled to the cartridge case and cartridge storage cases containg propellant is prohibited. Reference: Paragraph 2509a.

3. Under no circumstances shall repairs be made to the interior of magazines containing bulk explosives. Reference: Paragraph 1813.

4. Yes. Earth-covered magazines are preferred and may be used for the storage of all items of ammunition or explosives. Reference: Paragraph 1802a.

5. When necessary process steam may exceed 5 psi but shall not exceed 15 psi. Reference: Paragraph 523.

6. The boundary of each Government reservation in which restricted areas are located shall be posted at 500-foot intervals to show that the area within is a Government reservation and to warn against trespassing. Reference: Paragraph 1608.

7. Yes. All hunting shall conform to all applicable State and Federal regulations. Reference: Paragraph 1604.

8. Water hydrolizes chlorinated hydrocarbons to form hydrochloric acid. A reaction takes place in the bottom of the degreasing tank, heat is generated, and a serious fire and explosion hazard is created. Reference: Paragraph 1319.

9. Compressed oxygen in the presence of oils is almost certain to cause fire. Reference: Paragraph 1320b.

10. Generally, when carboy shipments are received, the stoppers should be loosened carefully and then re-tightened as a part of the storage procedure. Reference: 1302c.

TOOELE ARMY DEPOT WINS NSC AWARD OF MERIT

The National Safety Council has notified Tooele Army Depot that an Award of Merit will be forwarded for attaining 1,731,858 manhours without a disabling injury from 27 December 1966 to 1 March 1967.

SAFETY NOTES

UNIVERSITY OF FLORIDA
3 1262 09304 9350

UNITED STATES ARMY MATERIEL COMMAND

WASHINGTON, D.C. 20315